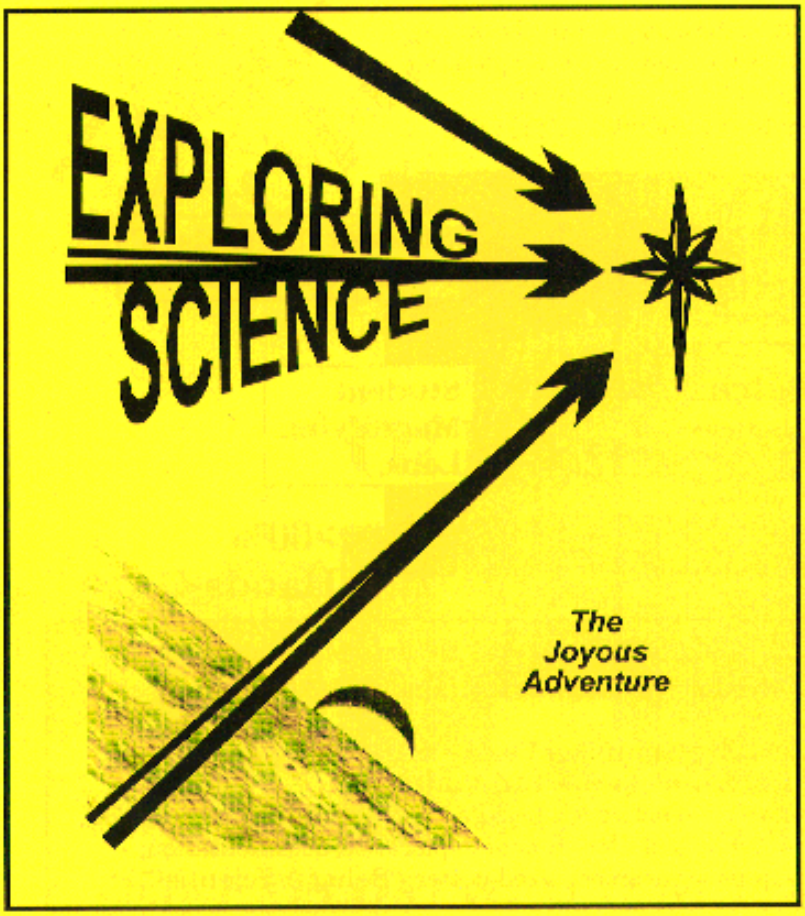
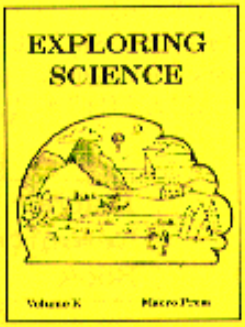
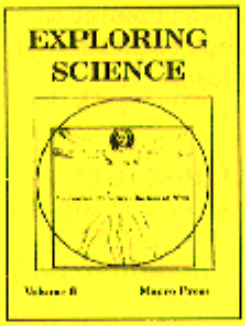
Launch Young K-6 Scientists



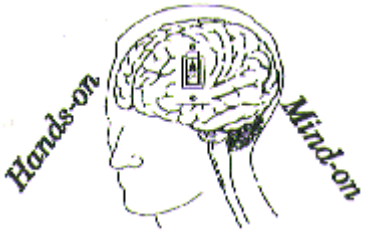


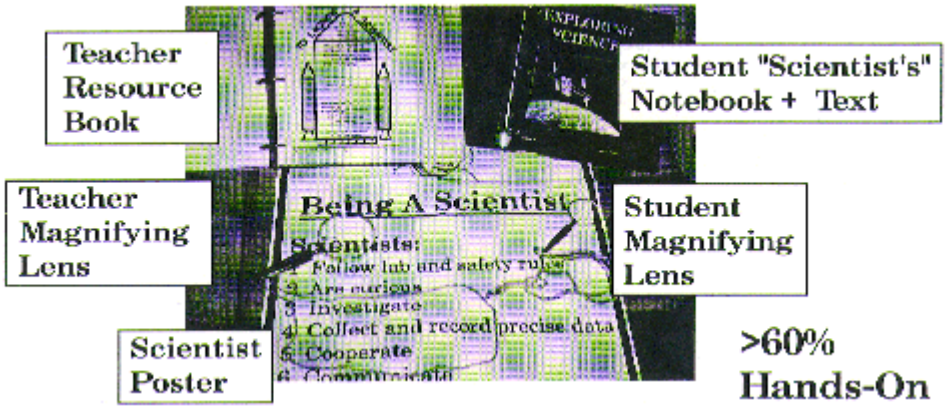
Into The Future
With Hands-on Explorations



EXPLORING SCIENCE

EXPLORING SCIENCE is a ***K-6 hands-on, minds-on*** Project 2061/US Department of Education based complete science program that helps integrate the curriculum. EXPLORING SCIENCE is legally compliant.





FULL PROGRAM (Teacher Resource + all Student Materials above)
For each Student: Text + Binder + 2" Magnifying Lens = $15.00

Teacher's Resource Book + 3.5" Magnifying Lens = $120.00
(absolute proration of teacher materials 1:25 students)
(includes over 300 pages of hands-on activities, background information, one copy of the Student Book, and blackline masters for student exploration documentation, teacher in-service materials, plus a classroom sized poster, **"Being a Scientist"**.)

INDIVIDUAL PROGRAM (1 each of all materials above)
Includes the right to copy student materials for <u>your</u> students.
Teacher's Resource Book + 3.5" Magnifying Lens = $225
(includes over 300 pages of hands-on activities, background information, one copy of the Student Book, and blackline masters for student exploration documentation, teacher in-service materials, plus a classroom sized poster, **Being A Scientist**".)
Plus One Student Book + Binder + 2" Magnifying Lens

Hawkins Learning Multiplies Understanding®
Hawkins Press

Phone/Fax support by the teacher/authors.

18242 Peters Court
Fountain Valley, CA 92708
Phone/FAX (714)964-9191

<u>Money Back Guarantee:</u>

We believe in our program! If you are not satisfied, return the materials within 30 days in a resalable condition. You will get a full refund!

Money Back Guarantee*

A Program written in the classroom by active
teachers that exceeds the Project 2061 implementation.

Color of Vision

Sound of Excitement

Motion of Hands-On

Students Gain:
Success & Confidence
Process Skills
Understanding

Teachers Gain:
Integrated Curriculum
Success for ALL students
Mentor Guidance

***Only* EXPLORING SCIENCE (K-6) Offers:**

1. Thematically linked chapter material
2. Integrated Curriculum
3. Sheltered English Training
4. Greater than 60% hands-on
5. Cooperative Learning Strategies
6. Reading Language Arts Teacher Ready
7. Materials affordable for all students
8. Consumables less than $2 per student per year

*9. 30 day MONEY BACK on any returned sellable materials.

Districts Gain:
Budget Protection
Cooperative Learning
Teacher Training

Macro Press
The Active Teacher
Company

Bringing
Science
To
Life®

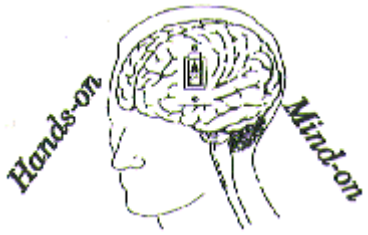
The EXPLORING SCIENCE Program Organization

"Why?" is a wonderful question. Every child, and every scientist, spends most of his/her day asking why. The question is pertinent to instructional material. Why was it written in the manner that it was? The presentation of known facts is vital to the process of developing knowledge and understanding. However, in an era of rapid scientific discovery, teaching science must be more than mere presenting of "facts", even when learned hands-on. The authors feel that the better way is to concentrate on the scientific process, and to teach the students to question, like Einstein, Darwin, and Leonardo da Vinci. Logical, organized problem solving, especially in groups and teams, is valuable to every person, not just those entering scientific fields. This program has as its first goal the teaching of the student to be a scientific problem solver.

Exploring Science is designed to raise a generation of functional, problem solving, and communicative adults. Grade after grade, each chapter helps the child grow in the ability to gain, organize, process, and communicate what she/he has learned, not only in science, but also in all other subjects. The first chapter teacher the students, beginning in kindergarten, how to be a scientist. Following are theme based chapters using the accepted themes of **Energy, Stability, Patterns of Change, Systems and Interactions, Scale and Structure, and Evolution** The final chapter is devoted to placing the student into an awareness that the scientist does not work outside of his/her society and environment, the History/Social Science tie.

Through hands-on explorations, the students are shown how scientist solve problems, and why they document as they do, by doing actual work and solving interesting problems. The Student Text is never the primary teaching tool. It is used to integrate the learning into the total curriculum by the use of raps, chants, poetry, and questioning. Even the glossary is hands-on in this program. Using National Academic Excellence Award-winning techniques developed in working with non-English speaking students, the authors have created the concept of an Interactive Glossary. Subject areas integrated throughout the program.

Language acquisition
From reading readiness to reading
From math readiness to math
Visual and Performing Arts
History/Social Science
Current Issues/Technology



The skills taught are enhanced as the students go up in the grades commensurate with their maturity. At all levels, the students are expected to explain what they have learned through cooperative learning techniques of Pair-Share, Teams, and Conferencing. Heavily used throughout is the graphic organizer. The students are expected to logically organize all of their material. They keep a Scientist's Notebook every year. This notebook is used exactly like Leonardo da Vinci used his notebook, as a reference of what has been seen, tried, and learned. The students are taught how to relate seemingly unrelated data to create new knowledge.

Physical, earth, and life explorations, thematically linked, are placed in the same chapter to insure that the student does not create artificial separations in his/her mind. The purpose is to generalize the knowledge. Every day all humans are faced with problems that seem unfamiliar. Thematic understanding that helps link previous studies, provides "can do" solutions that work. The ability to unify the unfamiliar with the known provides confidence in students.

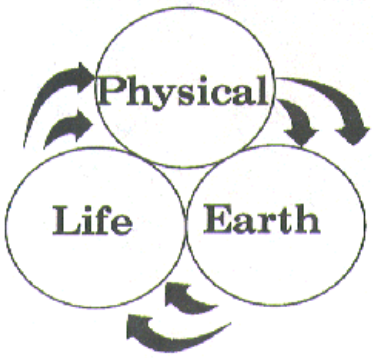
Science Understanding

Facts are not enough. We need to be able to apply them!

Understanding is easier when information is developed actively with hands-on explorations AND is related to other known information. Project 2061, American Association for the Advancement of Science, produced "Science for All Americans", a report defining the rationale for teaching thematically. "Science for All Americans" asked that Physical, Earth, and Life Science be taught at the same time linked by theme to provide true understanding. EXPLORING SCIENCE teaches thematically, but is also includes two additional themes. All grade levels, K-6, start with a theme of Being a Scientist to teach process, problem solving, documentation, and communication. They end with a chapter tied to History/Social Science to show how scientists work within a context.

THEMATICALLY LINKED

Energy
Stability
Evolution



Scale and Structure
Systems and Interactions
Patterns of Change

All Grades Themes. Being A Scientist AND History Social Science			
Grade K:	Scale and Structure Patterns of Change	Grade 4:	Scale and Structure Patterns of Change Energy
Grade 1:	Energy Systems and Interactions Evolution	Grade 5:	Scale and Structure Stability Patterns of Change
Grade 2:	Systems and Interactions Scale and Structure Evolution	Grade 6:	Evolution Energy Systems and Interactions
Grade 3:	Energy Systems and Interaction Stability		

Cooperative/Collaborative Learning is used throughout the program.

STUDENT APPLICATION

"Science is the limitless voyage of joyous exploration."
Walt Whitman

This is a program where hands-on/minds-on explorations are the heart.
The student text supports, adds, and clarifies content.

4th - Testing out the mystery materials

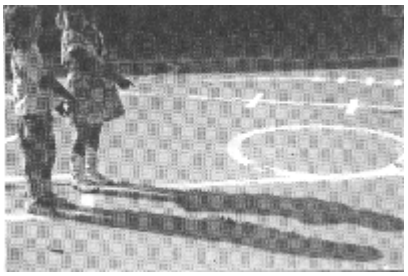
5th - Testing Parallax

3rd - Discovering the hardness of an egg shell

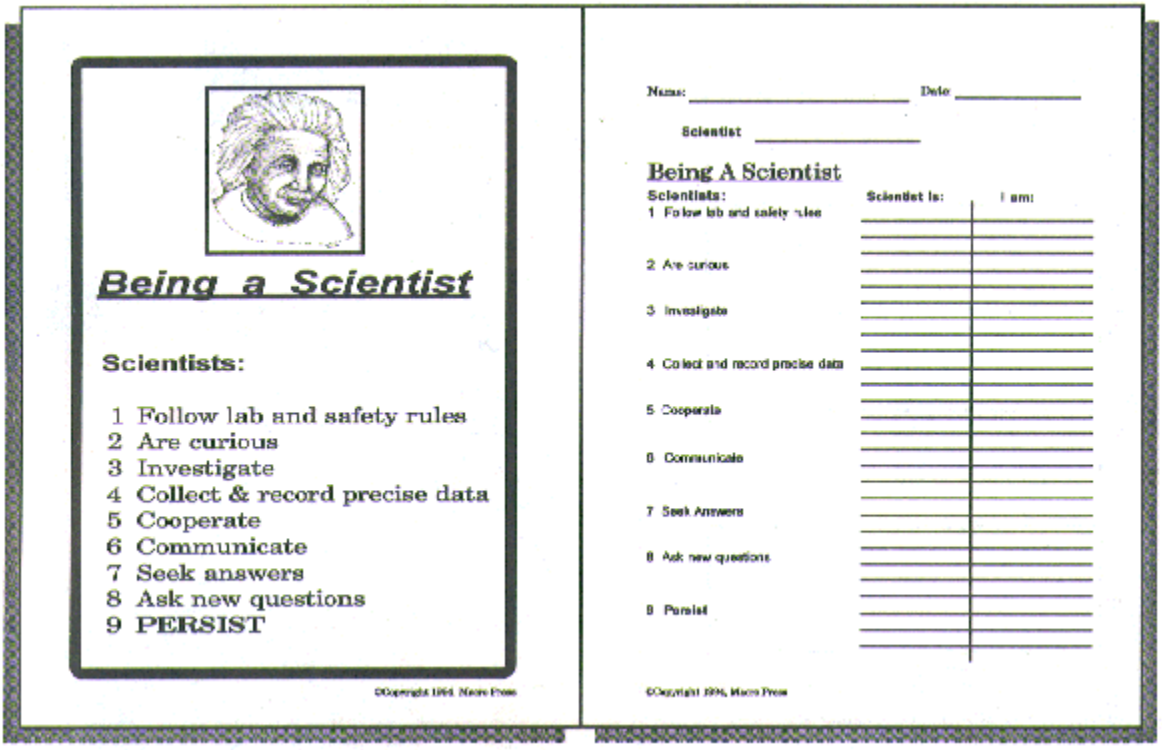
1st - Using a level

2nd - Observing chemical Change

6th - Preparing a volcano simulation



K - Discovering shadows



Being a Scientist

Scientists:

1 Follow lab and safety rules
2 Are curious
3 Investigate
4 Collect & record precise data
5 Cooperate
6 Communicate
7 Seek answers
8 Ask new questions
9 PERSIST

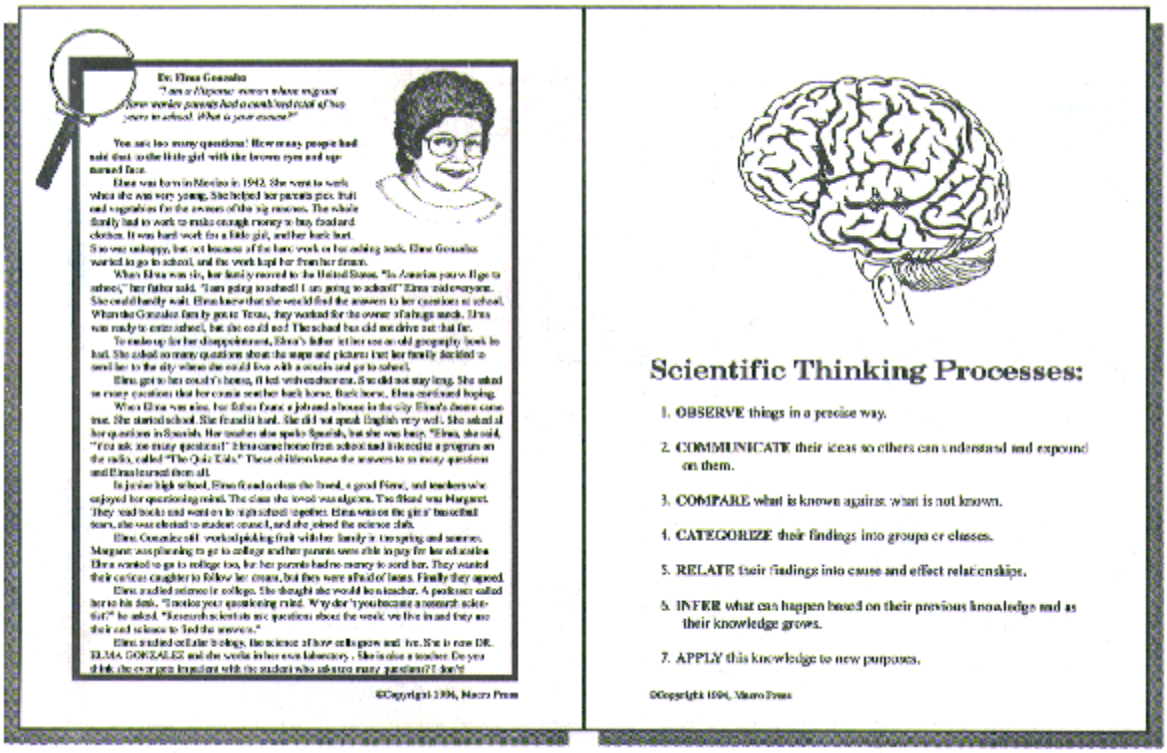
Name: _____ Date: _____

Scientist _____

Being A Scientist

Scientists:	Scientist is:	I am:
1 Follow lab and safety rules		
2 Are curious		
3 Investigate		
4 Collect and record precise data		
5 Cooperate		
6 Communicate		
7 Seek Answers		
8 Ask new questions		
9 Persist		

How a scientist thinks.



Dr. Elma Gonzalez

"I am a Hispanic woman whose migrant farm worker parents had a combined total of two years in school. What is your excuse?"

You are too many questions! How many people had told that to the little girl with the brown eyes and tape-matted hair.

Elma was born in Mexico in 1942. She went to work when she was very young. She helped her parents pick fruit and vegetables for the owners of the big ranches. The whole family had to work to make enough money to buy food and clothes. It was hard work for a little girl, and her back hurt. She was unhappy, but not because of the hard work or her aching back. Elma Gonzalez wanted to go to school, and the work kept her from her dream.

When Elma was six, her family moved to the United States. "In America you have to school," her father said. "I am going to school!" Elma told everyone. She could hardly wait. Elma knew that she would find the answers to her questions at school. When the Gonzalez family got to Texas, they worked for the owner of a huge ranch. Elma was ready to enter school, but she could not! The school bus did not drive out that far.

To make up for her disappointment, Elma's father let her use an old geography book he had. She asked so many questions about the maps and pictures that her family decided to send her to the city where she could live with a cousin and go to school.

Elma got to her cousin's house, filled with excitement. She did not stay long. She asked so many questions that her cousin sent her back home. Back home, Elma continued hoping.

When Elma was nine, her father found a job and a house in the city. Elma's dream came true. She started school. She found it hard. She did not speak English very well. She asked all her questions in Spanish. Her teacher also spoke Spanish, but she was busy. "Elma, she said, "You ask too many questions!" Elma came home from school and listened to a program on the radio, called "The Quiz Kids." These children knew the answers to so many questions and Elma learned from all.

In junior high school, Elma found a close friend, a good friend, and teachers who enjoyed her questioning mind. The close she loved was algebra. The friend was Margaret. They read books and went on to high school together. Elma was on the girls' basketball team, she was elected to student council, and she joined the science club.

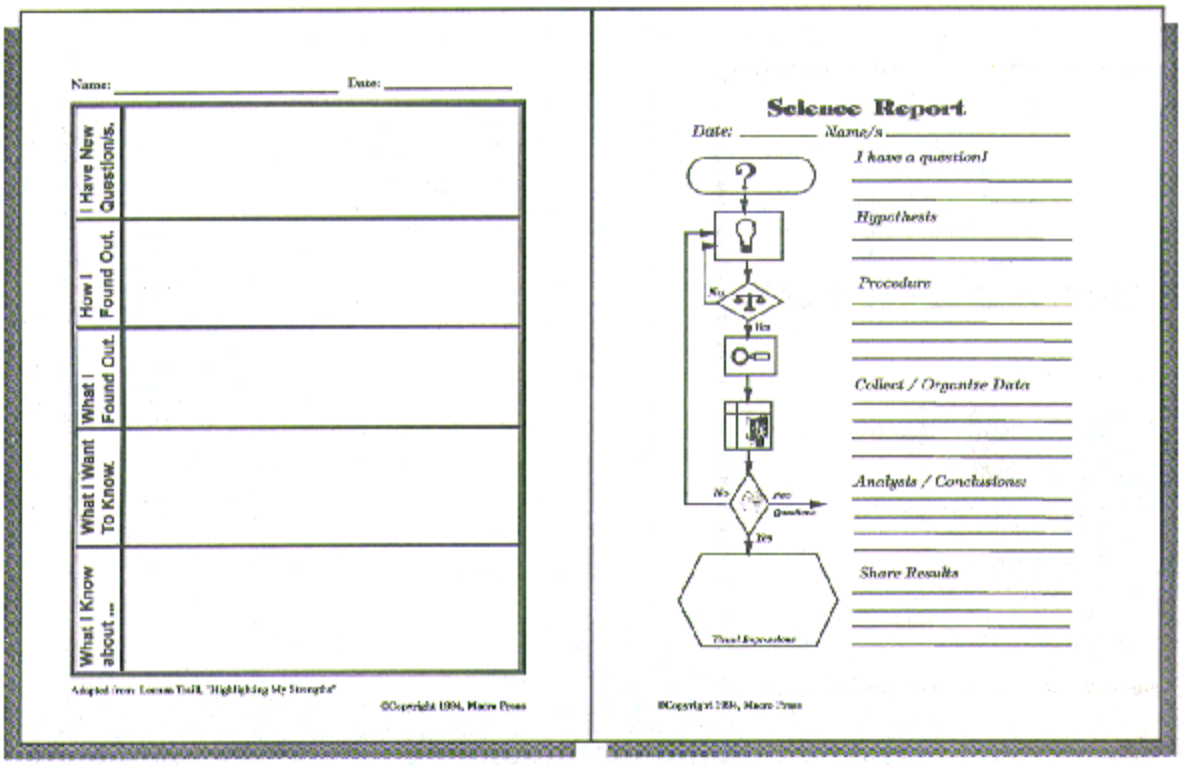
Elma Gonzalez still worked picking fruit with her family in the spring and summer. Margaret was planning to go to college and her parents were able to pay for her education. Elma wanted to go to college too, but her parents had no money to send her. They wanted their curious daughter to follow her dream, but they were afraid of loans. Finally they agreed.

Elma studied science in college. She thought she would be a teacher. A professor called her to his desk. "I notice your questioning mind. Why don't you become a research scientist?" he asked. "Research scientists ask questions about the world we live in and they use their mind science to find the answers."

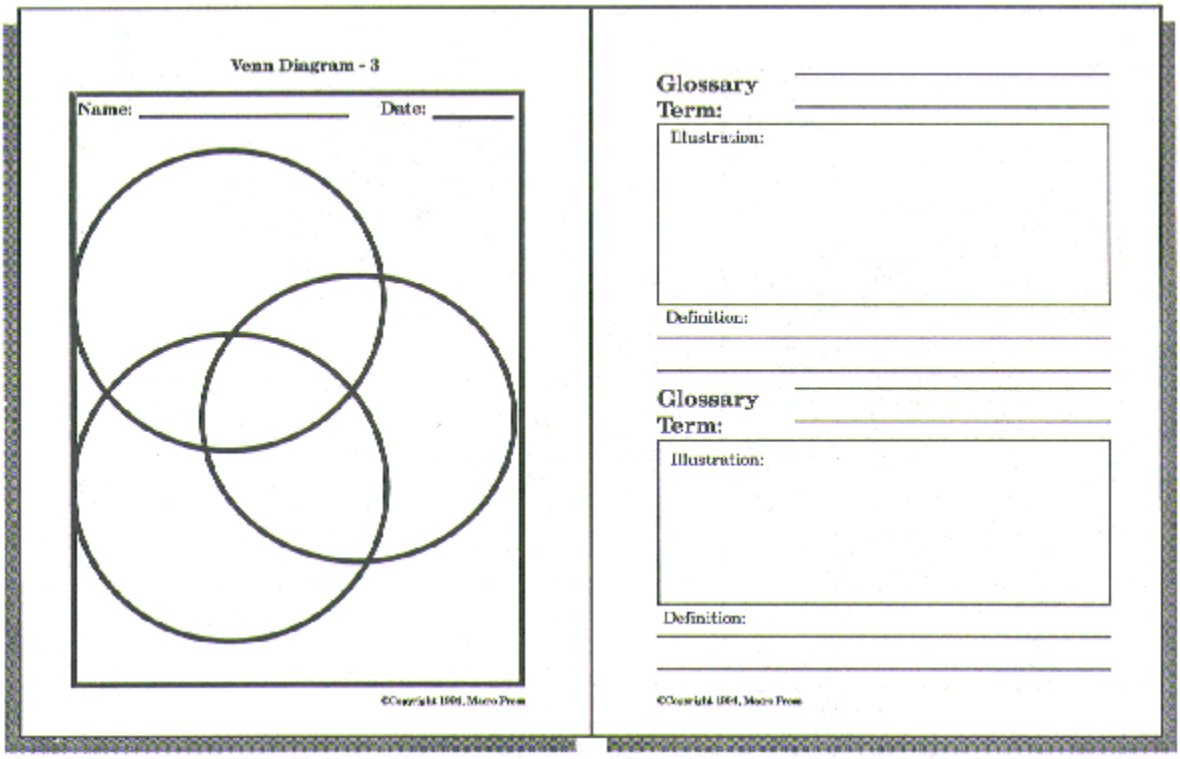
Elma studied cellular biology, the science of how cells grow and live. She is now DR. ELMA GONZALEZ and she works in her own laboratory. She is also a teacher. Do you think she ever gets frustrated with the student who asks so many questions? I don't!

Scientific Thinking Processes:

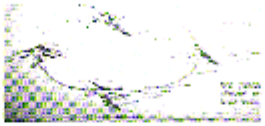
1. OBSERVE things in a precise way.
2. COMMUNICATE their ideas so others can understand and expound on them.
3. COMPARE what is known against what is not known.
4. CATEGORIZE their findings into groups or classes.
5. RELATE their findings into cause and effect relationships.
6. INFER what can happen based on their previous knowledge and as their knowledge grows.
7. APPLY this knowledge to new purposes.



How a scientist organizes.



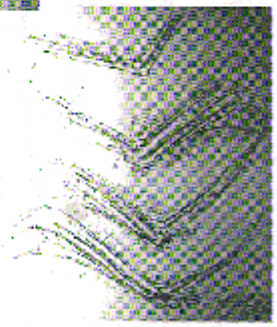
The Path To Invention



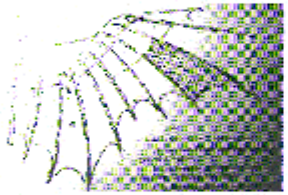
OBSERVATION:
Study the phenomena in detail.

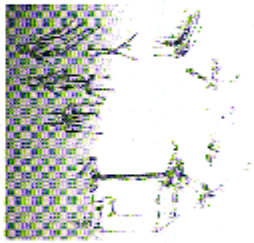
Grade 4 Sample

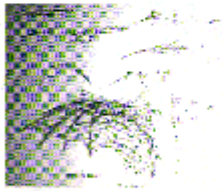
ANALSIS:
What forces and structures are acting in phenomena?



DESIGN:
Create possible means of duplicating or improving on observations.

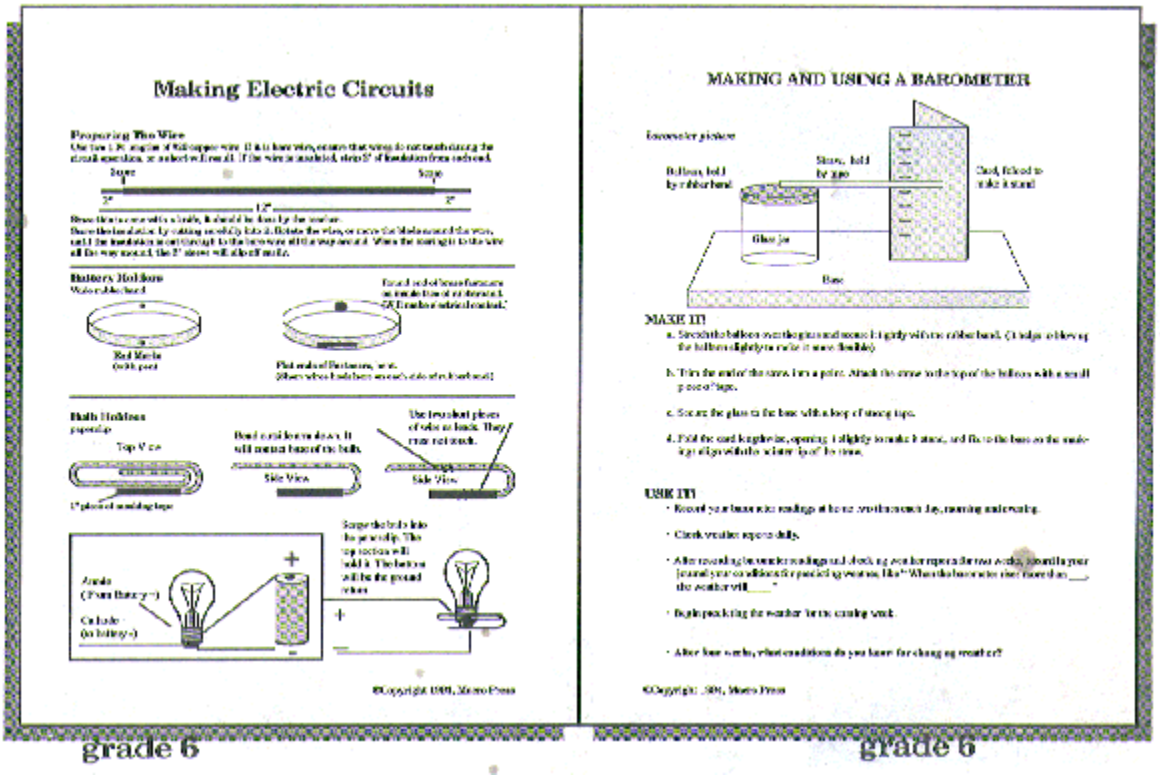




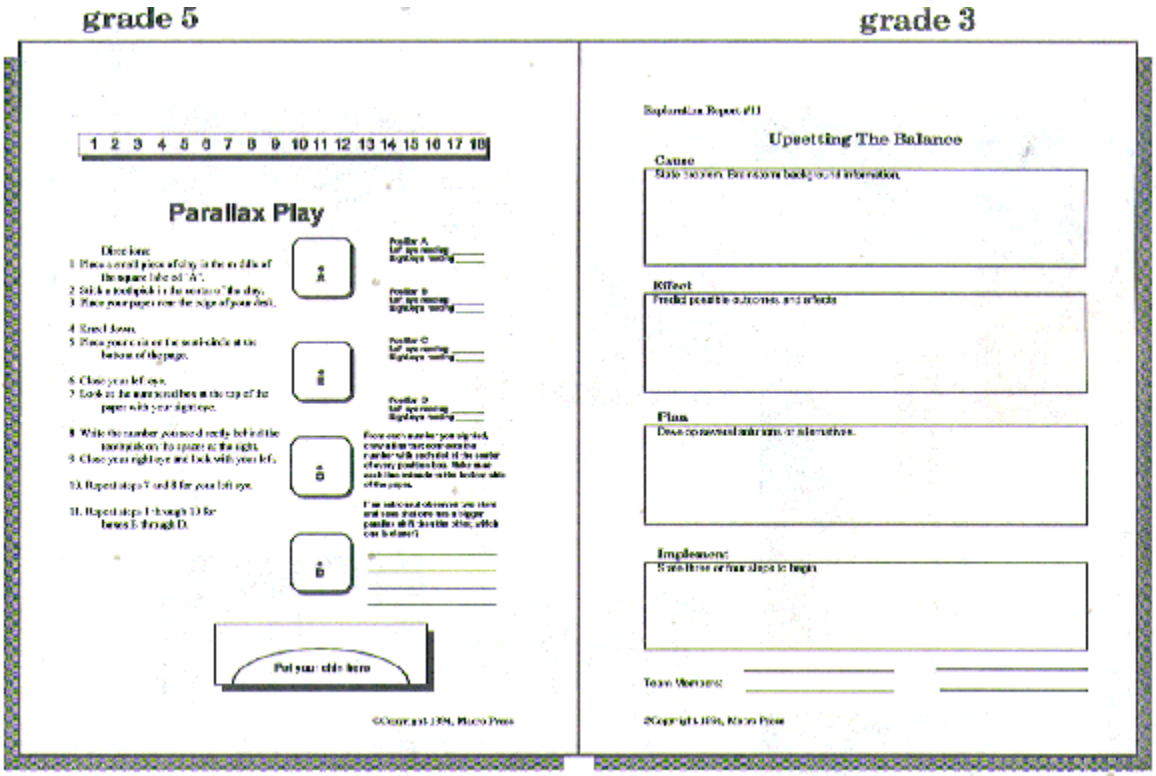


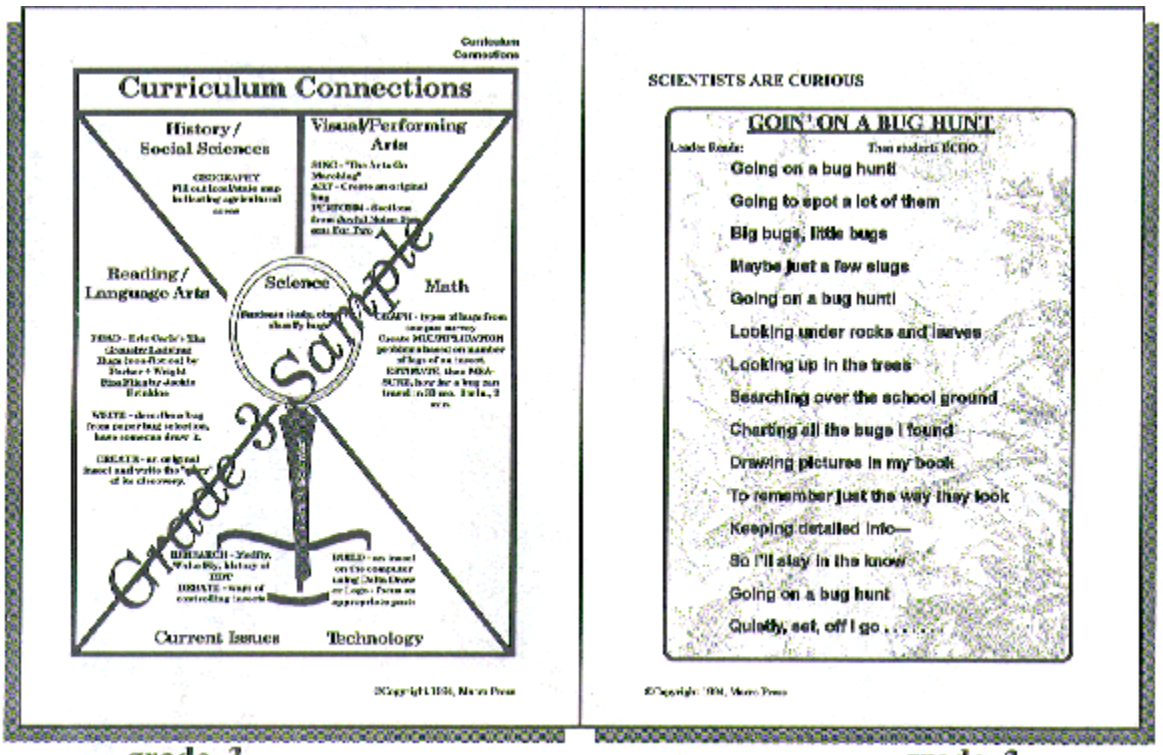
INTEGRATE:
Take the components of the design and make them work for you!

Da Vinci Drawings Courtesy of:
Elmer Belt Library of Vinciana
University of California, Los Angeles

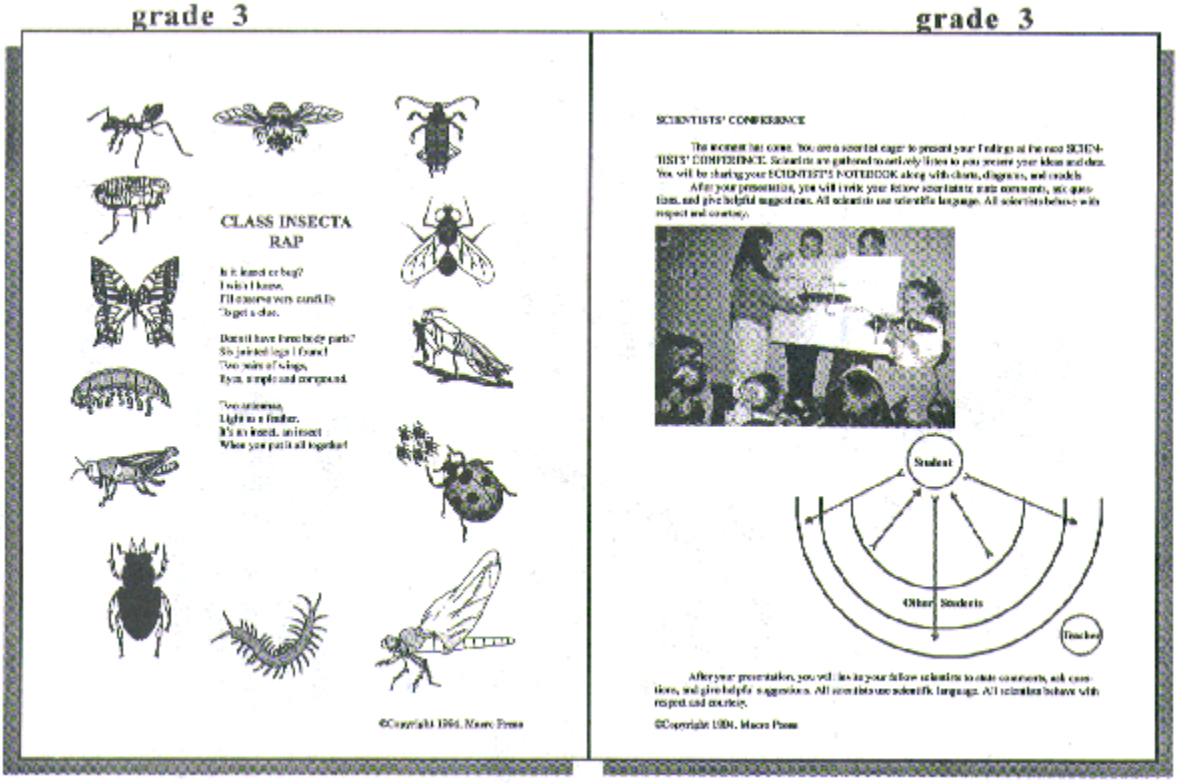


How to do and document.

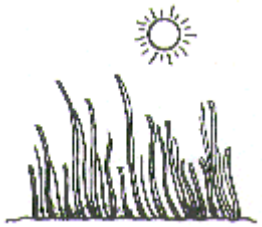




Integrated curriculum is fun.



The Desert That We Know



These are the grasses,
The desert grasses,
That grow in the desert
That we know.

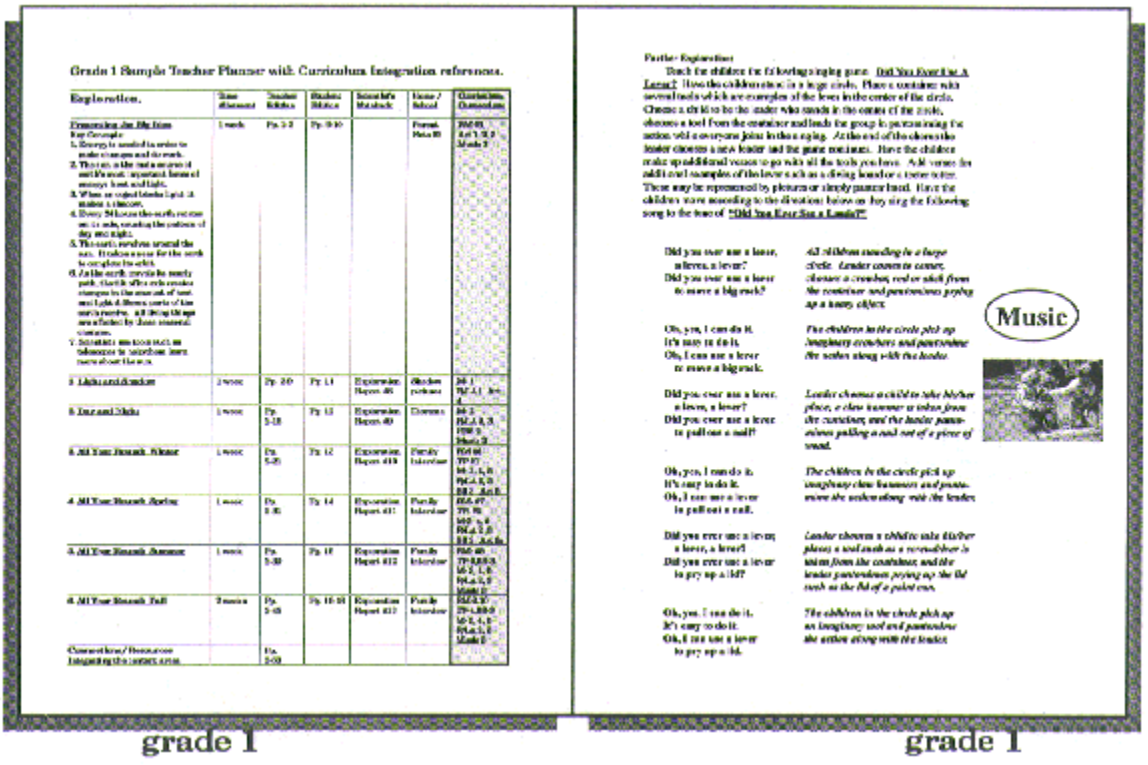
This is the rattlesnake,
The sidewinder rattlesnake,
Who swallows the lizard,
The fringe-toed lizard,
Who eats the grasshopper,
The lubber grasshopper,
Who nibbles the grasses,
The desert grasses,
That grow in the desert
That we know.

This is the grasshopper,
The lubber grasshopper,
Who nibbles in the grasses,
The desert grasses,
That grow in the desert
That we know.

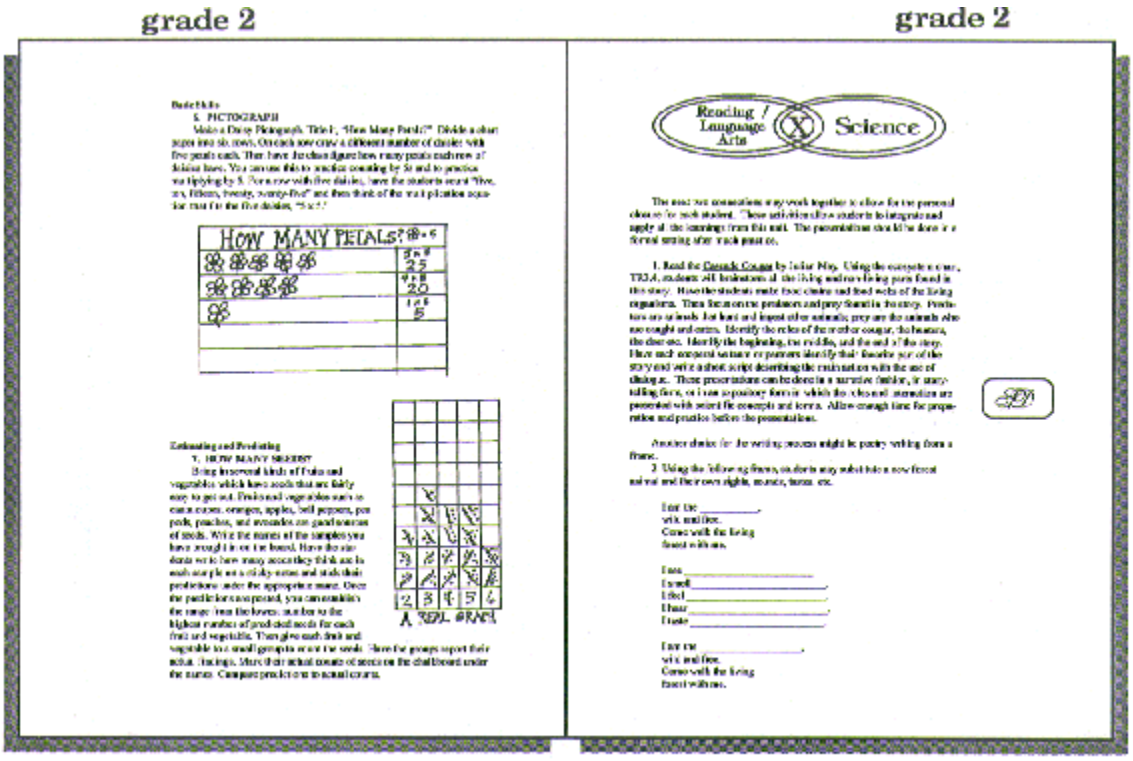
This is the roadrunner,
The fast moving roadrunner,
Who feeds on the rattlesnake,
The sidewinder rattlesnake,
Who swallows the lizard,
The fringe-toed lizard,
Who eats the grasshopper,
The lubber grasshopper,
Who nibbles the grasses,
The desert grasses,
That grow in the desert
That we know.

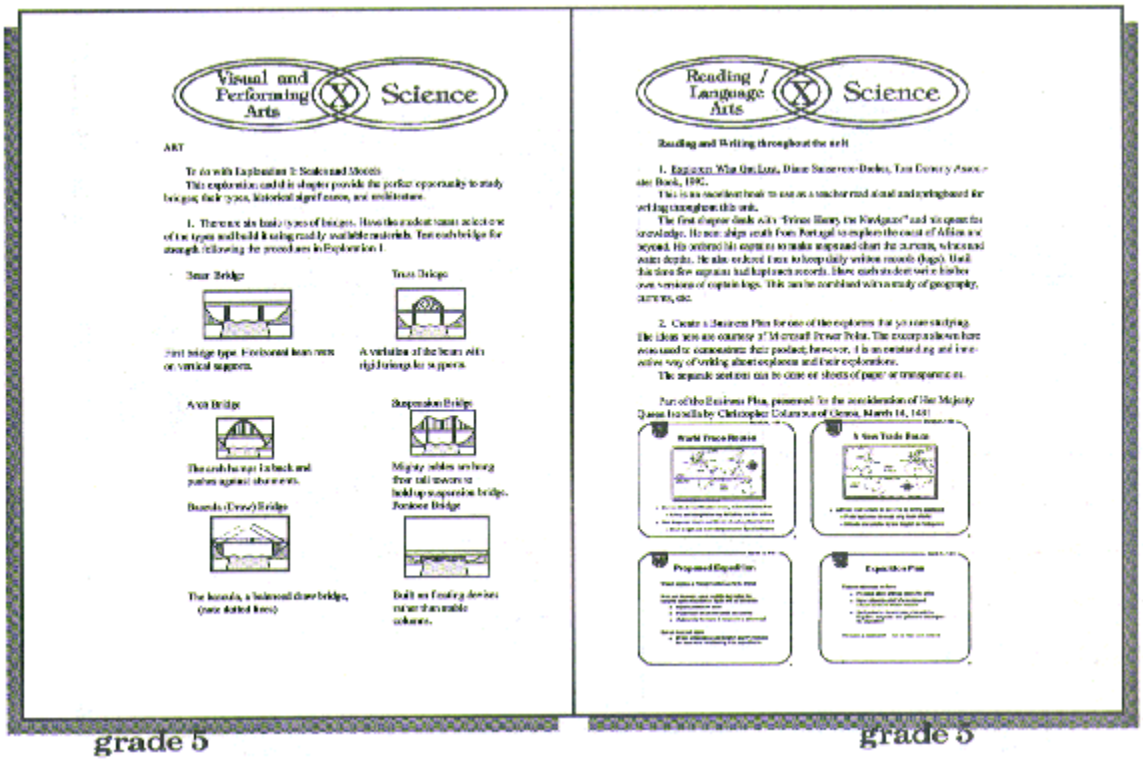
This is the lizard,
The fringe-toed lizard,
Who eats the grasshopper,
The lubber grasshopper,
Who nibbles the grasses,
The desert grasses,
That grow in the desert
That we know.

This is the vulture,
The turkey vulture,
Who is the scavenger
Of the desert.
It feeds on the animals,
The dead, dead animals,
That lived in the desert
That we know.

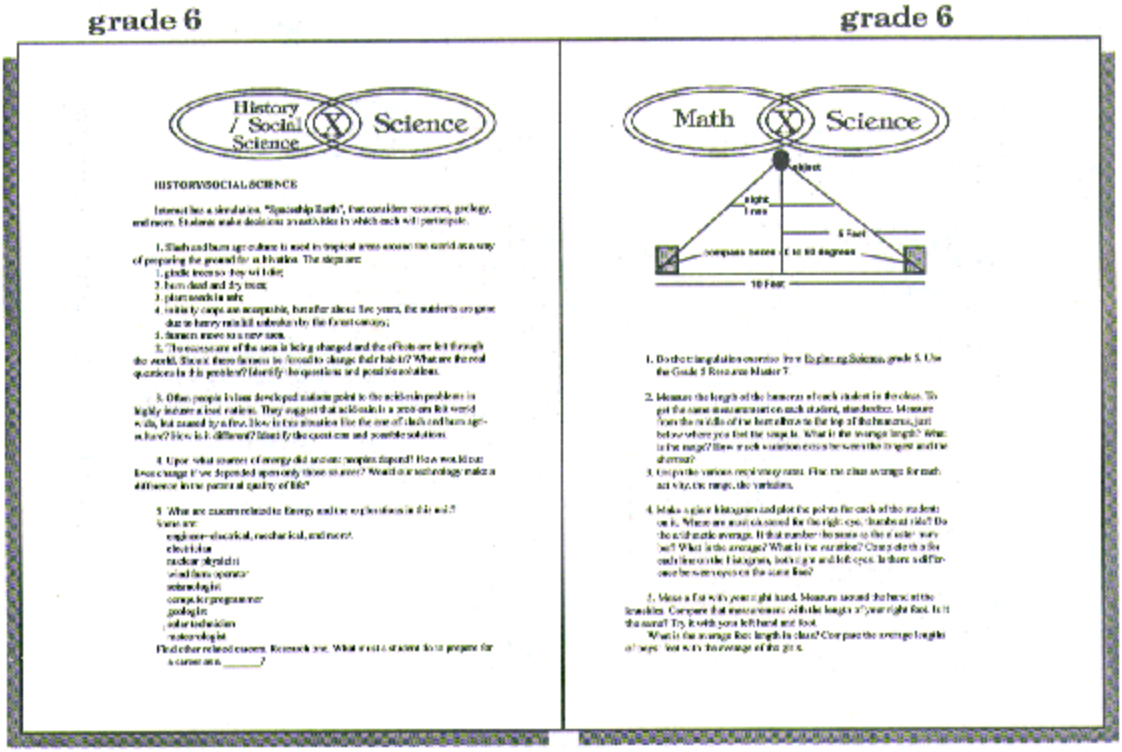


Aiding integration planning.





Aiding integration planning.



Nine week long K-6 sample lessons available for $5.00 refundable on any book purchase.

ORDER

Name_____
School District_____
Address_____
City_____State_____Zip_____
Phone_____

Product	Description	Price	Quantity	Total
Poster	Being A Scientist	$2.00		
Poster	Path to Invention	$2.00		
Poster	Whale	$2.00		
Poster	Energy	$2.00		

Note:

For curriculum materials description, see the inside front cover.
Full Program - Teacher manual $120 (prorated), student materials $15 each.
Individual Program - complete basic program $225 (you copy student pages for your students, magnifying lenses optional.)

grade level	Description	Price	Quantity	Total
OPTIONAL ITEMS				
Lens	Student	$4.00		
Lens	Teacher	$7.50		
Binder	Student (3 ring)	$2.50		

Purchase _____
Tax @ 7.75% (CA) _____
Total _____

Bringing Science To Life®

Send order to:
Macro Press
18242 Peters Court
Fountain Valley, CA 92708

Bringing Science To Life®